Tidal Wetland Monitoring Project Work Team

PWT Meeting Notes

Date: Wednesday, April 26, 2017
Time: 9am - noon
Location: DWR room 119
3500 Industrial Blvd, West Sacramento, CA 95691
Remote access via Skype: link in "Tidal Wetland" meeting request from Pascale Goertler,
Join by phone: 916-573-2034 Conference ID: 88321318
Back-up Conference Line: (916) 574-2008 (only if Skype line does not work)

CDFW- Sarah Estrella, Stacy Sherman, Rosie Hartman, Dave Contreras, Ryan Kok, Sunny Lee, Vanessa Tobias, Shruti Khanna, Dave Zezulak, Christina Sloop (skype), Phillip Poirier (skype), Laureen Thompson (skype), Melissa Riley (skype), Alison Furler (skype), Andy Rockriver (skype)
DWR – Ted Sommer, Heather Green, Gardner Jones (skype), Krista Hoffmann, Pascale Goertler, Anitra Pawley, Rhiannon Mulligan, Anitra Pawley, Eric Lobochefsky, Randy Mager, Joy Khamphanh
USGS – Larry Brown, Fred Feyrer, Oliver Patton
DSP – Maggie Christman, Karen Kayfetz, Martina Koller (skype)
SWFCA – Kelsey Cowin (skype)
SFEI – Cristina Grosso, April Robinson (skype)
ICF – Lenny Grimaldo
IEP – Steve Culberson
MWD – Shawn Acuña
USFWS – Julie Day, John DiGregoria
Stillwater Sciences - Bruce Orr
ESA - Ramona Swenson
USBR- Elissa Buttermore, Towns Burgess

I. Introductions/Housekeeping (10 min)
   a. Review of meeting notes – January 2017
   b. Agenda changes?

II. Conceptual Model Update (5 min)
   a. All models are being reviewed by the IEP Lead Scientist Steve Culberson.
   b. The models look to be in great shape.

III. Report from fish subteam meeting (10 min)

a. Discussed the results from our fish gear comparisons that took place last year.

b. Larval fish oblique and surface trawls were compared. No differences in CPUE, lengths, or fish composition (Feb-Apr). However, fish composition differed when just looking at April data and surface trawls estimated catching higher species richness. Surface trawls are recommended since they catch a majority of the fish and are less prone to snagging.

i. Comment – When sampling for Longfin Smelt think it may be important to think about their life stage as they may be near the bottom once they develop their air bladder.

IV. Planning for tidal wetland monitoring pilot phase IV (45 min)

a. Overview of previous FRP pilot phases

b. Fish Sampling Proposed For 2018

1. Fish sampling will be an extension of what is planned this year comparing Townet and Fall Midwater Trawl fish catch in the channels and open water habitat to fish catch in littoral habitat

a. A possible addition to this study is whether we should also sample alongside Spring Kodiak Trawl from Jan-Apr?

i. The tidal wetland project workteam suggested that we look at USFWS Delta Juvenile Monitoring data to see if this component is necessary.

2. Another fish study proposed for next year is using an ARIS sonar camera to determine the efficiency of boat electrofishing and gill nets.

c. Invertebrate Sampling Proposed For 2018

1. What is the variability between habitats within a site?
2. Can we keep up necessary levels of replication for invertebrate sampling?
    a. Do I keep trying to sample all the habitat types? or
    b. Should I just sample the habitat types present? The PWT says just sample what is there.
3. When during the year should macroinvertebrate sampling occur?
    a. Should all habitat types be sampled at the same time?
        i. Should fall sampling be added?
            1. Year-to-year changes and site-to-site difference can be measured with a single sampling bout.
            2. May want to add 2nd sampling bout based on species distribution to measure food resources where they are utilized.
            3. Salmon would be spring and smelt would be fall.
    b. Can we add contaminants collection for monitoring?
        i. FRP doesn't have expertise or money to do this, but we may be able to provide field collections.

    c. Have we mined data from colleagues?
        i. The conceptual models gathered a lot of that information.
        ii. We are collaborating extensively with outside groups to share information and samples
4. Should we expand zooplankton sites to include future fall sampling with comparisons to Fall Midwater Trawl?
    a. The PWT group decided that we do want to expand zooplankton sampling to the fall.

i. Comment - Should we look at Wim's production (growth) rates as a special study for these wetlands? FRP will keep this in mind as a special study, but it is not feasible in long-term monitoring.

V. Sturgeon use of tidal wetlands (Fred Feyrer, USGS, 15 min)

a. In and around Ryer Island the USGS used set lines to capture sturgeon, similar to what CDFW did.
b. White sturgeon were found in the shallow waters outside Ryer Island.
c. The USGS would like to know how and why white sturgeon use tidal wetlands.
    i. Outside agencies can contact Fred Feyrer if they would like to use the sturgeon they catch for additional analysis, particularly tagging studies.

VI. Smelt in tidal wetlands (Lenny Grimaldo, ICF, 40 min)

a. The past study occurred in 2013-2014 (Feb-May).
    i. They studied fixed marsh sites at an un-named, Ryer, Chipps, Wheeler, Browns, and Sherman islands.
    ii. Comparisons were made between the open water shoals and tidal marsh sloughs.
        1. Comparisons against the SLS survey were also made.
    iii. Larval Longfin Smelt with yolk sacs were found in the tidal marshes suggesting they spawn there.
        1. Temp, chl a, and salinity were important predictors of larval Longfin Smelt occurrence.

iv. It appears that Longfin Smelt have a broad rearing distribution in wet years.
v. Look for the paper out soon in *Estuaries and Coasts*

b. Current study Objectives
i. Determine relative abundance and distribution of Longfin Smelt larvae across the longitudinal gradient of the upper SF Estuary
ii. Determine Longfin Smelt densities in different habitats
iii. Determine if Longfin Smelt diets vary among regions and habitats sampled (eDNA and stomach contents)
iv. Determine diel vertical distribution of Longfin Smelt in the fall
v. Determine if Longfin Smelt growth rates vary among regions and habitats
vi. Examine rearing habitat of successful recruits via otolith microchemistry.

VII. Monitoring site tracking tools (Cristina Grosso, SFEI, 35 min)
a. EcoAtlas is designed to visualize aquatic resources for tracking and making management decisions. A grant application has been submitted to expand its capabilities
b. They want to develop a site tracker to identify where monitoring/research is being conducted and provide repository for data, and coordinate collaboration across monitoring efforts.
c. They will know if they are awarded the grant by July 2017.

VIII. Other updates
a. Tule Red – Major construction is slated this year to make channels, and get vegetation established. It is expected that Tule Red will be breached in 2018.
i. Lenny has 2 years of fish data outside of Tule Red.